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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,102

07/14/2006

Francois Coeuret

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AIR LIQUIDE

Intellectual Property

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HOUSTON, TX 77056

EXAMINER

TADESSE, YEWEBDAR T

ART UNIT

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1792

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,102	Applicant(s) COEURET ET AL.	
	Examiner YEWEBDAR T. TADESSE	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20 is/are allowed.
- 6) ☒ Claim(s) 7-9, 11-14 and 19 is/are rejected.
- 7) ☒ Claim(s) 10 and 15-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 14 is objected to because of the following informalities: claim 14 depends from cancelled claim 1. For the purpose of examination claim 14 depending from claim 10 is assumed. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 7-9, 11-14 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Cocolios et al (US 6,458,330).

Cocolios et al discloses (see Fig 1) an installation in which in which an operation of crosslinking a coating (ink or varnish), is carried out by ultraviolet radiation or by an electron beam, in the presence of a gas mixture with a controlled, the installation comprising a chamber using UV radiation or an electron beam; an entry device (inlet 5) and an exit device (outlet 8) adjacent the chamber (3), wherein the entry device including at least three components, seen in succession by running product to be treated, a labyrinth system(55), means for injecting an inert gas (slit 51) forming a gas knife and a channel (56); and wherein the exit device including at least three components, seen in succession by running product to be treated, a channel (86),

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means for injecting an inert gas (a plane-walled slit 81) forming a gas knife and means for creating a pressure drop (a labyrinth system 85 having a smooth profile), the distance between the smooth profile and the surface of the coating being less than the height of the channel (86).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7-9, 11-14 and 19 are rejected under 35 U.S.C. 103(a) as obvious over Turnbull et al (US 3,931,684) in view of Cocolios et al (US 6,458,330) .

Turnbull et al discloses (see Fig 5a and 22) an installation in which in which an operation of crosslinking a coating (capable of being ink or varnish), is carried out by ultraviolet radiation or by an electron beam (see column 1, lines 16-19), in the presence of a gas mixture with a controlled, the installation comprising an entry device (entrance 14) and an exit device (15) adjacent the chamber (2), wherein the entry device including at least the following three components, a labyrinth system(18, where smooth profile is), means for injecting an inert gas (3) forming a gas knife and a channel (see Fig 5a for the passage wherein air flowing adjacent air diffuser 6), the distance between the smooth profile and the surface of the coating being less than the height of the channel. Although Turnbull et al teaches a curing chamber by radiation or electron beam, an

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installation comprising a chamber having UV radiation or a source of accelerated electrons and the three components (a labyrinth system, means for injection an inert gas and a channel) in succession by the running product as claimed are not taught in Turnbull et al. However, Cocolios et al discloses an installation having a curing chamber with UV radiation (see claim 13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a curing chamber with UV radiation or a source of accelerated electrons to cure the coated substrate. As to the claimed successive arrangement of the installation, Cocolios et al discloses an entry device (inlet 5) and an exit device (outlet 8) adjacent the chamber (3), wherein the entry device including at least three components, seen in succession by running product to be treated, a labyrinth system(55), means for injecting an inert gas (slit 51) forming a gas knife and a channel (56); and wherein the exit device including at least three components, seen in succession by running product to be treated, a channel (86), means for injecting an inert gas (a plane-walled slit 81)) forming a gas knife and means for creating a pressure drop (a labyrinth system 85 having a smooth profile). It would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the three components in Turnbull et al to improve installation of a chamber and to control over the treatment of gaseous atmosphere inside the chamber as taught by Cocolios et al (see column 2, lines 28-44).

Allowable Subject Matter

6. Claims 10 and 15-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claim 20 is allowed.

8. The following is a statement of reasons for the indication of allowable subject matter: Prior art of record does not disclose or suggest an installation in which an operation of crosslinking a coating is carried out by ultraviolet radiation or by an electron beam in the presence of a gas mixture with a controlled residual oxygen content, comprising, among others, a chamber having one or more UV lamps, an entry device, the entry device comprising an additional means for injecting an inert gas and channel in addition to the labyrinth system, means for injecting an inert gas forming a gas knife and channel of the entry device.

Response to Arguments

9. Applicant's arguments filed 10/22/2009 have been fully considered but they are not persuasive.

Examiner withdraws the 112 rejections in view of the amendment. As to applicants' argument (see Remarks/ Arguments page 8) showing side by side comparisons of the installation of Cocolios and applicants' invention, it is noted that the

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side by side comparison recites the differences in the two invention with regard to the route taken by the product to be treated as it passes through the entry device. This feature is not recited in the rejected claim(s). Applicants also indicated that a substrate passing through the present invention would first come in contact with the labyrinth followed by the means for injecting an inert gas followed by the channel compared to the invention of Cocolios. This argument is not persuasive. The argument is not commensurate in scope with the claims. The claims are not limited to a substrate passing through would first come in contact with the labyrinth followed by the means for injecting an inert gas followed by the channel as argued. Applicants' claims simply require the three components seen in succession by running product. The claims are not limited to the exact positioning of the components relative/ in comparison to the other part of the device, or the direction/route of the product relative to part of the device.

Even the positioning of the components is in the succession as argued; it would have also been an obvious matter of design choice to rearrange components, since it has been held that rearranging parts of an invention only involves routine skill in the art. *In re Japikse*, 86 USPQ 70.

For at least the reasons described above the examiner maintains the rejections of claims 7-9, 11-14 and 19 in view of Cocolios et al alone and Turnbull et al in view of Cocolios et al.

As to the original claim 12, examiner inadvertently missed to include this claim in the rejections; however it is clear that Cocolios teaches the exact claimed ratio (see column 7, lines 19-22).

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YEWEBDAR T. TADESSE whose telephone number is (571)272-1238. The examiner can normally be reached on Monday-Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Yewebdar T Tadesse/
Primary Examiner, Art Unit 1792